

viding contraception is used during the drug therapy and for four weeks thereafter. The hope is that newer retinoids will be discovered that may have less toxicity but retain clinical efficacy. Systemic retinoids are valuable drugs that need to be used cautiously by dermatologists skilled in their use. They represent a major advance in the management of patients with severe selected dermatoses.

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Liposuction in Dermatology

IN THE AMAZINGLY SHORT TIME since liposuction was first introduced to cosmetic surgeons in the United States, it has been standardized and vastly improved. American ingenuity and manufacturing preeminence have produced many new and better suction pumps and cannulas. Today a properly selected patient can safely have a liposuction operation under local anesthesia on an outpatient basis, although for patients requiring large amounts of fat removed, general anesthesia may be preferred.

Most office-based surgeons use a variation of the wet technique. A hypotonic saline solution, hyaluronidase, epinephrine and lidocaine are injected into the area to be suctioned. This provides adequate anesthesia, and the dilute epinephrine reduces the bleeding. The use of the wet technique seems to reduce or totally eliminate the problems with fluid balance and blood loss. It is not uncommon to stand a patient up during the procedure so that the gluteal crease and the lateral thighs can be accurately sculptured.

Narrower cannulas are generally used today: 4- and 6-mm cannulas for the trunk and proximal extremities and 3- and 4-mm cannulas for the submental and jowl areas. There are several new designs for the tips of the instruments, including a spatula-shaped tip, multiple ventral openings and partial frontal openings. All of these changes have made the operation physically easier for physicians and far less traumatic for patients.

As is true with most new techniques, the success rate goes up and the complication rate goes down as physicians become more knowledgeable in selecting patients. Nowadays, very gratifying results are consistently produced on the lower abdomen, the lateral thighs and the medial knees. Good results are commonly achieved on the upper abdomen, the medial thighs and the ankles. The "love handle" area requires more experience and judgment because often it is a fold of heavy skin rather than excess fat. Also, the results after suction of that area may take as long as 12 months before the full benefit is achieved.

Liposuction can be used alone or in conjunction with a face-lift procedure for the submental and jowl areas. Many surgeons use liposuction as an adjunct to the face-lift procedure, both to improve the results and also as a technical aid to cleaning fat from the platysma muscle or undermining the cheek flap.

Some giant lipomas can be treated with liposuction. Male

gynecomastia will respond to such treatment. Occasionally the lateral and medial arms have a fat collection that is successfully treated by liposuction.

The major complications include fluid loss, blood loss, infection and hematoma. Some of these complications have been catastrophic, with infections leading to disseminated intravascular coagulation, and there are reports of deaths due to pulmonary emboli. There are also reports of visceral perforation. As tragic as these events are, the incidence is low and the causes are presumed to be associated with poor surgical judgment, poor follow-up, inadequate fluid replacement or inadequate attention to sterility. Almost all of these major complications have occurred in patients who were treated in a hospital general surgery or come-and-go surgery. The experience to date thus does not support the contention of those malpractice insurance carriers who want to limit their coverage to only those physicians with hospital privileges for liposuction operations.

Minor complications include irregular or wavy skin. Most of the time this will soften in 6 to 12 months. Numbness is one of the most common complications, but its incidence does not exceed 5% of patients. The frequency of all of these complications is acceptably low in exchange for the gratifying results in an area where previous techniques were woefully inadequate.

Liposuction has made us aware that body fat differs genetically. Some areas are slow to catabolize by ordinary diet restriction. Studies are under way to examine the metabolic variation of localized fat collections and to assess the overall effect on metabolism when selected amounts of fat are removed.

This procedure is appropriately gaining popularity as the medical profession is better able to select and deliver satisfactory results in a safe setting. Many persons with figure fault deformities have had to deal with the social consequences. Before liposuction procedures, such persons had to live in a semistarved state, and even that was not always helpful.

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Using Lasers in Skin Surgery

LASER IS AN ACRONYM for *light amplification by stimulated emission of radiation*. The basic principle of lasers is that a high-intensity monochromatic collimated beam is directed to target tissue and produces localized tissue injury.

The most commonly used apparatus today is the carbon dioxide laser, which emits a beam in the far infrared portion of the light spectrum. This laser light is absorbed by water and produces localized tissue vaporization or coagulation as the tissue is rapidly heated. The other frequently used laser is the argon laser, which produces a blue-green light in the visible spectrum that is selectively absorbed by hemoglobin and results in coagulation.

The CO₂ laser has a wide variety of uses in dermatology, including vaporizing benign cutaneous neoplasms and warts, excising skin cancers, removing superficial pigmented lesions such as lentigines or seborrheic keratoses, removing tattoos and excising vascular proliferations such as port-wine stains